

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

Reserve
A60.19
F762

FEB 28

CURRENT SERIAL NUMBER



RANGE IMPROVEMENT

VOL. 8, NO. 4

NOTES

OCTOBER 1963

INDEX

Two-Man Wire Stringer	1
Barbwire Stringer	4
Pickup Truck Barbwire Stringer	6
Pesky Weeds Licked As Roadside Problem	8
Fertilized Native Plants Promise Quick and Cheap Roadbank Protection	10
NACA Suggests Safe Handling of Empty Containers	13

(AGRI - OGDEN)

STATEMENT OF PURPOSE

- - -

This publication is printed primarily to inform professional range administrators of important range improvement and management developments and findings. These "Notes" may include extracts of published papers, unpublished preliminary reports of research work, unpublished reports on administrative studies and personal observations or suggestions of other range administrators. No claim is made as to the accuracy or completeness of studies or conclusions drawn.

All who read these RANGE IMPROVEMENT NOTES are encouraged to submit material for publication, or suggestions for improving its usefulness. Full credit will be given for any material used.

TWO-MAN WIRE STRINGER

By Stephen M. Rushton*

- - -

There are several methods to string barbed wire with mechanical devices. However, they are limited to areas where equipment can be utilized. In many cases the terrain is so rough that the only way to string wire is by hand.

The two-man method of stringing wire is a very old and widely used method. The carrying devices have varied from a crow bar to a shovel handle. These devices do not offer protection from the wire while turning and do not keep it from sliding from side to side.

An employee on the Austin Ranger District, Toiyabe National Forest, Nevada, sustained a sprained back because the wire slipped on a bar to his side while traversing steep terrain. To eliminate this hazard a two-man wire carrying device was developed. (Figures 1 and 2)

The wire is placed on the stringer by separating the bar, slipping the carrier rod through the wire spool and rethreading the bar. The wire should always feed from the bottom. This will prevent the bar from separating while stringing wire.

Method of Construction:

1. Obtain the materials listed in Figure 3.
2. Thread the three pieces of pipe on both ends.
3. Weld the discs to the sleeves making sure the disc is fitted to the inside edge of the sleeve.
4. Thread the caps to the handles and the handles to the sleeves. Tighten.
5. Thread the carrier rod to one sleeve and tighten all connections to this point. Can be spot welded if desired.

* District Forest Ranger, Toiyabe National Forest, Austin, Nevada

TWO-MAN WIRE STRINGER

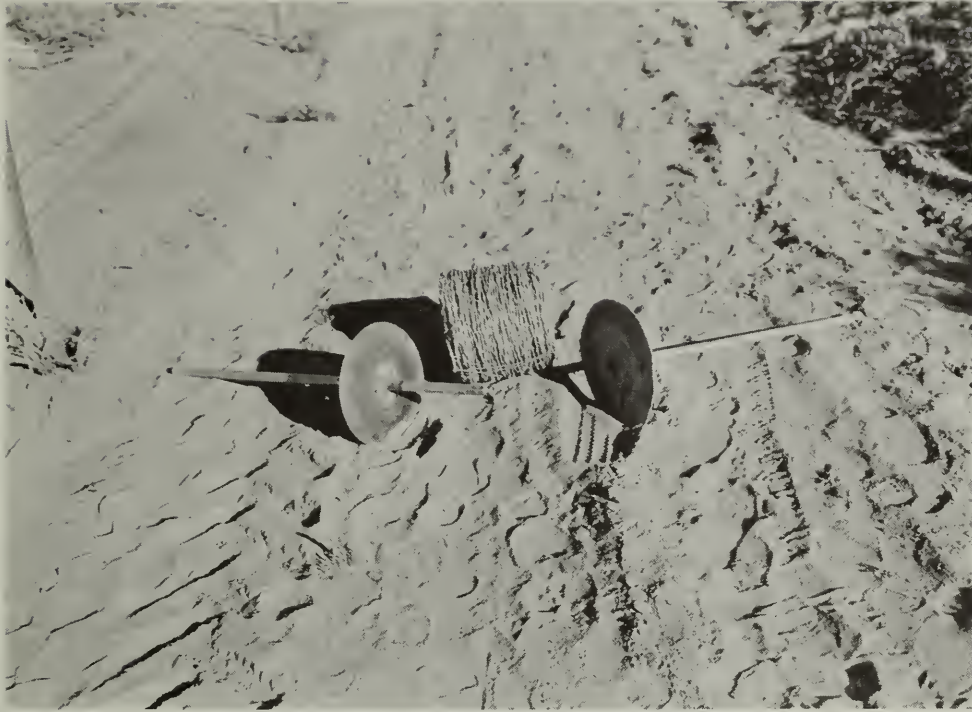
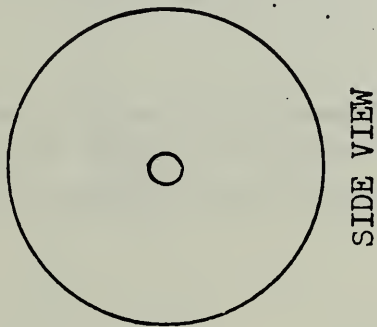
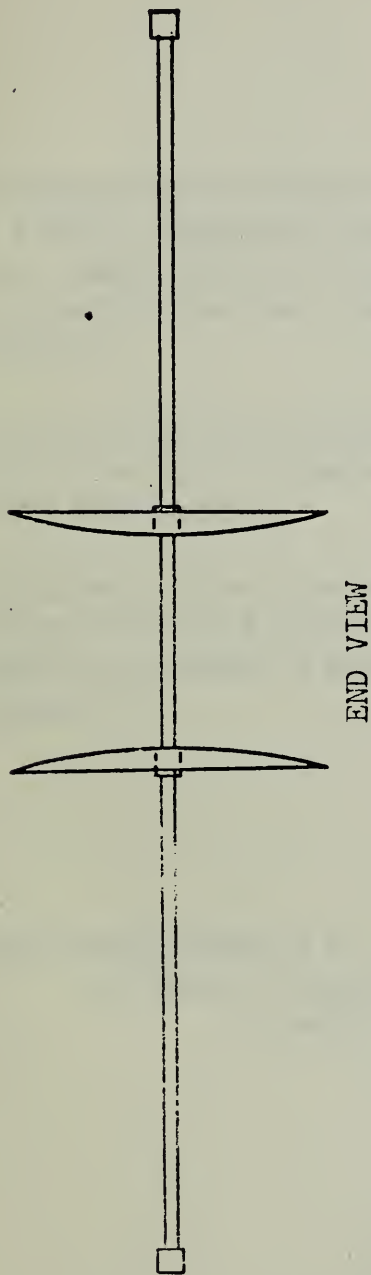


Fig. 1 - Wire stringer assembly opened for loading.



Fig. 2 - Two-man wire stringer in operation. Wire is unrolled from the bottom of the spool.



BILL OF MATERIALS

2	3/4"X2 1/2' Pipe
2	3/4" Caps
2	3/4" Sleeves
1	3/4"x1' Pipe
2	18" Grain Drill Disc

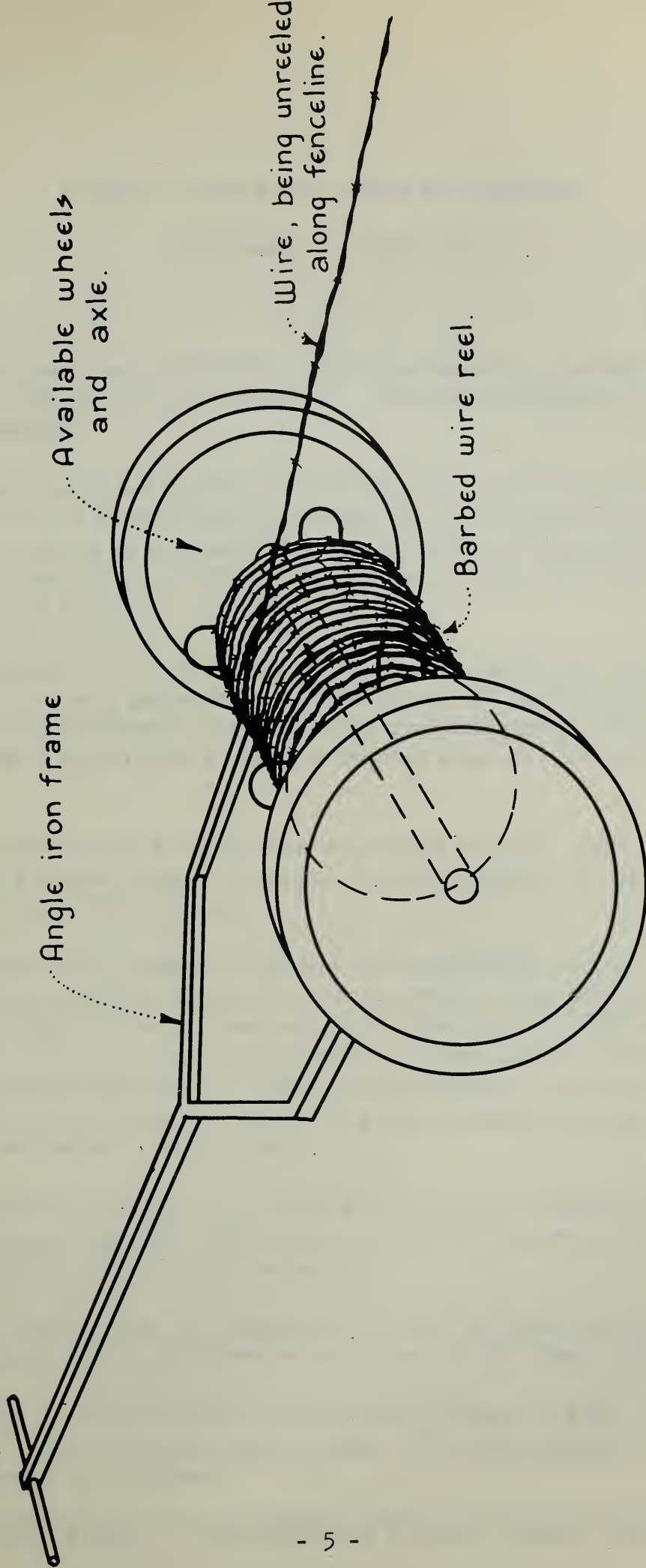
TWO-MAN WIRE STRINGER

Scale 1 inch = 1 foot

Date November 8, 1962

By Stephen M. Rushton

FIGURE 3



CART^{for} STRINGING BARBED WIRE

Employee Suggestion #1674. Oct. 1959.

FIGURE 1

PICKUP TRUCK BARBWIRE STRINGER

By Owen M. DeSpain *

- - -

There is need for a more efficient method of unrolling barbed wire along a fence line during construction. Present methods are slow and usually unsafe.

A new method developed on the Cache National Forest removes the hazard of spools of barbed wire unrolling too fast endangering workers. The stringer method is adaptable for use on different types of conveyance from the rear bumper of a pickup to the flatbed of a truck or wagon. (Figures 1 and 2).

On a 1/4-inch plate 76 inches long by 15 inches wide are welded four 1-1/2-inch by 14-inch galvanized or iron pipes, 19 inches apart. These pipes are extended through and securely welded to the plate. (Figure 3) Each pipe holds a spool of barbed wire in a vertical position.

To avoid entanglement of the barbed wire as it unrolls, four pipes 3/4-inch by 14 inches long are welded 19 inches apart, or halfway between the 1-1/2-inch pipes.

In placing one to four spools of barbed wire vertically on the 1-1/2-inch pipes, the rate they unwind is in proportion to the pull upon the wire. The weight of the vertical spool of wire acts as a brake as the wire unrolls. The unrolling of barbed wire from spools mounted on a horizontal bar was hazardous. This method allowed the spools to unroll uneven and oftentimes too fast. It was necessary to apply some type of manual brake to each spool.

The plan (Figure 3) shows the barbed wire stringer adapted with necessary angle irons for attachment on the rear bumper of a pickup. Other methods of mounting can be used.

The value of this method is measured in terms of safety and the speed with which rolls of barbed wire can be placed along a fence line.

The estimated cost for construction of this stringer is \$40. The type of mountings required would vary in cost. The total weight of the stringer is about 125 pounds.

*District Forest Ranger, Cache National Forest, Logan, Utah

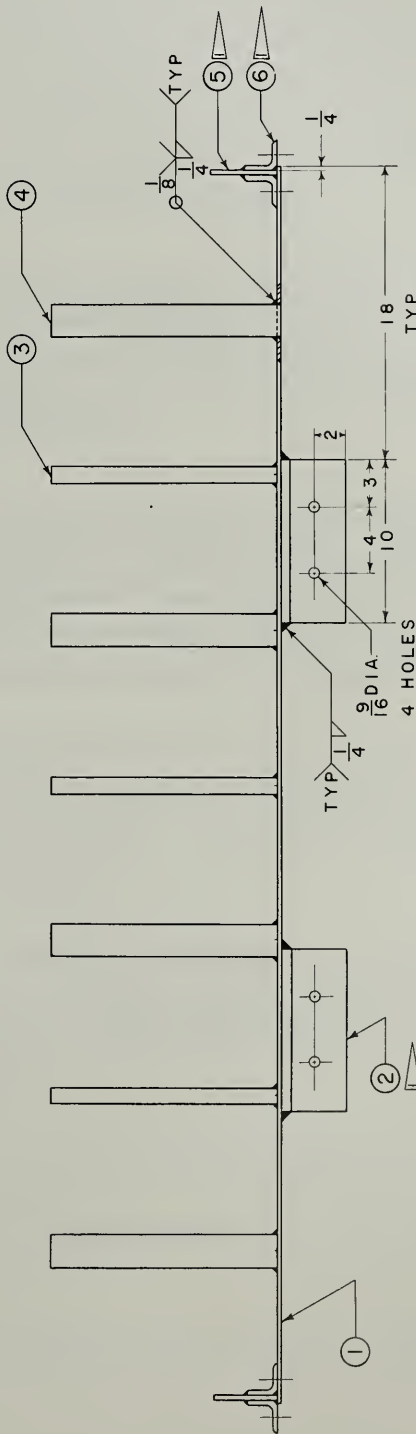
PICKUP TRUCK BARBWIRE STRINGER



Fig. 1 - Rear view of barbwire stringer mounted on a pickup truck.



Fig. 2 - Side view of barbwire stringer mounted on a pickup truck.



ITEMS ②, ⑤ & ⑥ MAY HAVE TO
BE REVISED DEPENDING ON BACK
BUMPER OF TRUCK.

QTY.	ITEM	NOMENCLATURE OR DESCRIPTION	MTRL.
4	6	ANGLE 2 X 2 X $\frac{1}{4}$	STL.
2	5	$\frac{1}{4}$ PLATE	STL.
4	4	PIPE $\frac{1}{2}$ I.D. X 14 L.G.	STL.
3	3	PIPE $\frac{3}{4}$ I.D. X 14 L.G.	STL.
2	2	ANGLE 4 X 6 X $\frac{1}{2}$	STL.
1	1	$\frac{1}{4}$ PLATE	STL.

BARBED WIRE STRINGER

PESKY WEEDS LICKED As Roadside Problem 1/

By Robert F. Tegner 2/

- - -

Wind and water have taken their toll on Idaho highways - especially in the construction stage - but the weeds that come in to take over have been just about as pesky!

Happily, however, cooperative work of the Idaho Department of Highways, Soil Conservation Districts, and the Soil Conservation Service has been writing an erosion and weed-control success story in Idaho for nearly a decade. Consultation between the SCS and the Highway Department had gone on for a decade and a half before the farmers' and ranchers' districts formally entered the field.

Highways are costly enough without having to "doll them up," and Idaho engineers were pressed to make highway dollars produce as much roadway as possible. But as wind, water, and weeds wreaked havoc with soil and scenery, it became increasingly obvious that something more than "dolling up" was needed.

In 1953, noxious weeds, which nearby farmers were fighting in their fields, were plaguing the Idaho Highway Department, especially along a stretch of Highway 30 North between "I Go Pass" and Pocatello. Knowing from past consultation that the SCS had the technical answers to such problems, highway engineers turned to it again for help.

As a result, the Power Soil Conservation District agreed to eradicate weeds and seed the right-of-way with its own equipment and supplies, at cost. A formal agreement was signed - the first of many which have been executed in the 9 years since.

From this first contract came a sample cooperative agreement form, including specifications, species, seeding rates, fertilizer, and other pertinent items, prepared for use by other Soil Conservation Districts and the Idaho Highway Department.

1/ SOIL CONSERVATION, U. S. Department of Agriculture,
October 1962

2/ Information Specialist, Soil Conservation Service, Berkeley,
California

"The idea has spread, also, to districts and highway departments in adjacent States," SCS State Soil Conservationist Luther Jones said.

The whole arrangement is mutually beneficial. Dollar-conscious highway officials get erosion and weed control at cost. Farmers, who are trying to rid their fields of weeds, can be confident the State is doing likewise along highway rights-of-way; and they share with others of the motoring and taxpaying public the pleasure of highways that not only look better but cost less to maintain.

Roy Harden, assistant chief of the Highway Department's design section, said difficulties encountered where timing or other circumstances prevent immediate seeding only serve to demonstrate the effectiveness of the control program elsewhere. Fifteen to 20 percent of some fills have been eroded by winds whipping the fine-textured soil where control measures could not be initiated in time to prevent it.

The Department has been consulting with SCS personnel since the thirties, Harden pointed out. The SCS had soils and plant information to determine types of grasses, trees, and shrubs that would grow in the particular areas. The Highway Department on its own, with advice from the SCS, has seeded more than 5,000 acres of borrows, banks, and fills.

Most seedlings have been of crested or sodar wheatgrass. In addition to the seeding, straw mulch has been applied in many areas, at a rate of 2 tons to the acre, along with 200 pounds of 16-20-0 fertilizer. The seed sometimes is drilled through the mulch. The program also has included experimental shrub and tree plantings.

Erosion and weed control now have earned a significant place in Idaho's highway plans. As a result, more and more of the State's modern ribbons of concrete and macadam are flanked by banks of vegetation, eliminating scars which for years made conservationists and highway engineers shudder - along with the motoring public.

FERTILIZED NATIVE PLANTS PROMISE QUICK AND CHEAP ROADBANK PROTECTION 1/

By E. C. Richardson and E. G. Diseker 2/

- - -

Research at the Coosa Watershed Research Project in Georgia is showing that fertilizer and lime will encourage naturally seeded native plants. This finding is significant as an inexpensive means for reducing erosion. Fertilizer and lime can be easily applied on existing county and State roads where high costs of vegetative establishment by other means may be prohibitive.

Observations of unvegetated roadbanks in the Piedmont area of Georgia showed many native species actually had established themselves, although they were so small and impoverished that it was hard to see them. In such a state of arrested development, they gave no protection against erosion. As a result, the roadbanks eroded badly, creating sediment problems in streams and reservoirs, causing traffic hazards, and greatly increasing the cost of roadside maintenance.

The impoverished native species found on the roadbanks in the Georgia area, around Cartersville, were broomsedge, beggarweed, perennial lespedezas of both upright and trailing type, and several others. Discovery that native species offered real promise resulted from a series of experiments devoted largely to determining the value of various domesticated plant species for roadside revegetation.

In these experiments, a complete fertilizer was applied, along with lime, and with and without surface mulches. Wherever the planted domesticated species failed because of low winter temperatures, high summer temperatures, or late plantings of warm-season species, the native vegetation came in. Furthermore, treated but unseeded check plots soon produced a flourishing growth of native species which rapidly stabilized the area.

1/ SOIL CONSERVATION, U. S. Department of Agriculture,
October 1962

2/ Soil Scientist, and Agricultural Engineer, respectively, Soil and Water Conservation Research Division, Agricultural Research Center, Agricultural Research Service, Cartersville, Georgia

The responses of the native species to soil fertility treatments were so great that a separate study on fertilizer rates was initiated. Experiments were laid out in which 4-12-12 fertilizer was applied at rates of 0, 250, 500, 1,000, and 2,000 pounds an acre, with 2 tons of lime an acre, and worked into roadbank surface where impoverished plants already grew. The initial fertilizer treatments were applied March 11, 1958. Nitrogen was applied at the rate of 50 pounds of N an acre, in June 1958.

Maintenance fertilizer treatments in 1959 consisted of 250 pounds of 4-12-12 an acre to plots which received the same amount in the initial application. All other plots were fertilized with 500 pounds of 4-12-12 an acre in March 1959. Nitrogen was applied again in June 1959, at the rate of 50 pounds of N an acre.

Brush and rough plants were removed once during the growing season. Native cover species were never cut. They were allowed to make maximum growth during the frost-free growing season to produce seed which shattered on the land. The standing plants acted as a trap for seed moved by wind.

All of the different rates of 4-12-12 plus nitrogen resulted in vigorous growth and development of the native species as a protective cover on the lower two-thirds of the bank the first growing season after fertilizer treatment. During the second growing season, the cover extended up the bank and filled much of the remaining open area with new seedlings. With the exception of the check plots, 250 pounds of 4-12-12 plus nitrogen treatment produced the poorest cover. The 1,000 pounds of 4-12-12 plus nitrogen was almost as good as the 2,000 pounds an acre rate but not much improved over the 500 pounds an acre rate.

Broomsedge and poverty grasses were the predominant native species that developed during the first 2 years. Their seeds were probably transported by the wind much easier than the heavier seeded species, such as native perennial lespedeza. A cover of honeysuckle, dewberries, and other native species also developed as a result of fertilizer application.

It appears that roadbanks may be conserved quickly and cheaply in the Southern Piedmont by applying 500 pounds of 4-12-12 fertilizer an acre from February to May, followed by 50 pounds of N an acre in May or June. In all probability, these results with native species could be duplicated in many other areas, but only those areas with

a fair stand of native plants should be so treated. Areas totally void of vegetation should be completely seeded. Generally, the areas that can be stabilized by fertilizer treatments only will be found along the older roads.

On very steep roadbanks with 1 to 1 or 2 to 1 slopes, it is essential to mulch the surface to hold the fertilizer and lime until vegetation can be established.

-o0o-

The statesman of the future will not boast
that he was born in a log cabin.

He will begin his autobiography:
"My people were a one-car
family."

- - Fiorello La Guardia, quoted
in the New York Mirror

-o0o-

Two dangerous companions when loaded: Driver & Highway.

-o0o-

Most of us hate to see a poor
loser - or a rich
winner.

- - Harold Coffin

NACA SUGGESTS SAFE HANDLING OF EMPTY CONTAINERS *

- - -

The following suggestions have been carefully developed by a special Industry Committee of the National Agricultural Chemicals Association as basic safe-disposal procedures for empty containers of toxic pesticide chemicals. These expressions of opinion are based on information believed to be reliable but are NOT intended to supersede the manufacturer's specific instructions for individual products that may appear on the label of the container. No guarantee or warranty is expressed or implied that compliance with these suggestions will insure complete decontamination of ALL containers under ALL circumstances. The manufacturer of the product should be consulted as to recommendations for each specific product.

For All Empty Containers Of All Types: Do not re-use the container. Completely empty the contents and bury the unused chemical at least 18 inches deep in an isolated location away from water supplies.

Glass Containers: Break the container and bury the pieces at least 18 inches deep in an isolated location away from water supplies.

Fiber and Paper Containers: Burn the empty container completely. Exercise extreme caution and stay well away from the smoke.

Metal Containers: One-gallon cans - Pour one pint of water into the empty can and add one tablespoonful of household detergent. Rotate the can carefully to wet all inner surfaces with the solution. Bury the rinse solution at least 18 inches deep in an isolated location away from water supplies.

Punch holes in the top and the bottom of the can, crush the can and bury deeply in an isolated location. 5-gallon, 30-gallon, and 55-gallon drums - Pour the following mixture into the empty container:

5-gallon drums - 2 qt. water, 1/2-cup caustic soda (household lye), 2 tablespoons detergent.

30-gallon drums - 3 gallons water, 1-pound caustic soda (household lye), 1/2-cup detergent.

* Stauffer Chemicals NEWS LETTER, November 1962

55-gallon drums - 5 gallons water, 2 pounds caustic soda (household lye), 1 cup detergent. Rotate container carefully until all inner surfaces are thoroughly wet. Bury the rinse solution at least 18 inches deep in an isolated area away from water supplies. (Caution: Handle caustic soda (household lye) with extreme care. Do not get on skin, in eyes, or on clothing. Read and carefully follow the precautions on the package.) Punch holes in the top and bottom of the container, crush it and bury deeply in an isolated area.

If the above rinse method cannot be used, punch holes in the top of the container and burn in a hot fire until all the paint has been completely burned off the container. Use extreme caution to insure that the containers are completely empty and that persons stay well away from the smoke. Do not burn more than five containers at once.

-o0o-

A big man
is not one who makes
no mistakes, but one who is
bigger than any mistakes he makes.

- - From Rocky Mountain Region Notes

-o0o-

When you gamble on
the highway you bet
on your life.

-o0o-

The most painful wound in the world is a stab of conscience.

- - John Ellis Large



